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(57) Abstract

Novel compositions for controlling skin aging and/or increasing skin elasticity are disclosed. The compositions include two active principles of which one affects the formation of Amadori products while the other inhibits elastase activity. Said novel compositions are particularly suitable for cosmetic or dermatological use.

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NOVEL COSMETIC OR DERMATOLOGICAL COMPOSITIONS

The invention refers to a new cosmetic or dermatological composition intended to control aging of the skin and/or increase the elasticity of the skin.

Aging of the skin is a complex phenomenon, involving numerous more or less slow reactions that lead to a reduction of skin elasticity and the appearance of wrinkles.

These changes of the biomechanical properties are primarily due to the evolution of two of the main macromolecules of the dermis, collagen and elastin.

It is indeed known that collagen renews itself more slowly with age and replacement of the old fibers becomes more difficult by reason, notably, of the appearance of internal cross links forming bridges between the collagen fibers.

These links, the number of which increases with age, are involved in the stiffening and rigidification of the tissues, which are characteristic phenomena of aging tissue.

It has also been shown that these bridging links come primarily from the binding of glucose to the collagen, in particular, to the latter's lysine and hydroxylysine residues (ref. 1).

This non-enzymatic binding of glucose is known as glycation and has long been demonstrated, notably, by the work of Maillard. Since then, the binding of other sugars, such as fructose or ribose, has also been shown.

The binding of glucose to proteins involves a series of reactions among which is the formation of unstable Schiff bases, which rearrange themselves as more stable products, known as Amadori products. Over time, these Amadori products may then react with a variety of molecules to finally give, after rearrangement, irreversible structures.

In the case of glucose, experiments have shown that one of the irreversible products finally formed is [2-(2-furoyl)-4(5)-(2-furanyl)-1H-imidazole].

This product is yellowish brown and fluorescent.

In the case of glucose, it has been possible to establish a correlation between the increase in the rate of glycation and the increase in the resistance to the traction of the collagen (ref. 2), as well as a reduction of its solubility (ref. 3), establishing the harmful role of these glycation products in the mechanical properties of collagen.

It is furthermore known that the binding of glucose to proteins leads to, in the presence of oxygen, the formation of free radicals (ref. 4). The destructive effects of free radicals on the different constituents of the skin are well known: lipid peroxidation, cutting of proteins and glycosaminoglycans, bridging between tyrosine residues and proteins, etc. Because of these degradations, the appearance of free radicals is also a factor in the aging of skin tissue.

Finally, if the glycation of collagen occurs in an oxidizing environment, other types of bridgings are also formed. For example, fructolysine, in turn, is degraded into N-(carboxymethyl) lysine or is transformed, after reaction with an arginine residue, to finally give pentosidine.

These bridgings resulting from the glycoxidation of proteins also increase with age in man (ref. 5).

It has then been proposed to use substances that prevent the Amadori products from rearranging themselves over time into irreversible products. It has been shown that aminoguanidine reduces the crosslinking of the proteins contained in the arterial walls of diabetic patients. Aminoguanidine acts by blocking the transformation of the Amadori products resulting from the rearrangement of glucose and a protein into [2-(2-furoyl)-4(5)-(2-furanyl)-1H-imidazole] (ref. 6).

Furthermore, it has long been known that elastases are the enzymes responsible for the degradation of elastin by hydrolysis (ref. 7) and that, accordingly, elastases also contribute to the degradation of the elastic properties of skin.

Two types of elastases can be found in skin. First of all, leukocyte elastase is released by polymorphonuclear leukocytes following exposure of the skin to tension or stress, notably ultraviolet radiation, pollution, infection, etc. (ref. 8). Furthermore, elastases belonging to the class of metalloproteases are synthesized by the fibroblasts of the dermis, increasingly so with age (ref. 9).

The bridging of collagen by glycation and the rigidification of the fibers that result therefrom, on the one hand, and the destruction of the elastin fibers under the effect of the elastases, on the other hand, are two phenomena the conjugation of which induces a loss of elasticity of the dermis, which leads to the formation of wrinkles and face lines. So it is important to act simultaneously on both phenomena to restore suitable skin elasticity and to control the appearance of wrinkles.

Although the use of compounds such as aminoguanidine already shows an anti-glycation action, the Inventors of this patent application have sought to improve the results obtained.

The main purpose of this invention is, therefore, to provide a new cosmetic or dermatological composition with improved conjugated anti-glycation and anti-elastase action that will make it possible to prevent the formation of free radicals.

Another purpose of this invention concerns the use of anti-glycation compounds and anti-elastase compounds for the purpose of preparing a cosmetic composition.

The composition, according to this invention, for the purpose of fighting aging and/or increasing skin elasticity, is characterized by the fact that it contains a first active principle chosen from among the natural or synthetic compounds capable of inhibiting the formation of

Amadori products by a non-enzymatic reaction of sugars, notably glucose, with the collagen of the skin, with said first active principle consisting of a single compound or a mixture of several compounds; and by the fact that it includes a second active principle chosen from among the natural or synthetic compounds capable of inhibiting the activity of elastases of the skin, with said second principle consisting of a single compound or a mixture of several compounds.

This invention is the result of the surprising discovery that certain products can block the glycation of proteins at a stage earlier than that of the formation of Amadori products.

In this way, the mechanism of the degradation of collagen by glycation can be blocked even earlier than before and thus makes it possible to obtain better results on the elasticity of the skin.

According to the invention, the first active principle is chosen notably from among the amino acids, preferably the basic ones, notably lysine, arginine, histidine; peptides, preferably those containing one or several basic amino acids; allantoin; vitamin E, vitamin B_1; vitamin B_6; thiourea; dithiothreitol; the derivatives of organic silicon and/or the derivatives of these products.

According to one preferred embodiment of this invention, the derivatives of amino acids comprise notably lysine pyrrolidone carboxylate, arginine pyrrolidone carboxylate and arginine aspartate.

According to the invention, the second active principle is chosen from among the compounds capable of blocking the action of leukocyte elastase and/or the elastases synthesized by fibroblasts. It is chosen notably from among vegetable extracts rich in tannins, anthocyanosides, procyanidolic oligomers, soybean extract, notably soybean protein extracts, α-1-anti-trypsine, algae extracts, notably the hydrolyzates of green algae proteins and microalgae extracts, polysaccharides, notably sulfated polysaccharides, and ceramides.

According to the invention, the composition comprises, as a percentage by weight in relation to the entire weight of the composition, from approximately 0.01% to approximately 50% by weight of said first active principle, preferably from approximately 0.1% to approximately 10% by weight, more preferably from around 0.2% to approximately 5% by weight and from approximately 0.01% to approximately 50% by weight of the second active principle, preferably from around 0.1% to approximately 10% by weight, more preferably from approximately 0.5% to approximately 5% by weight.

According to one preferred embodiment of this invention, the composition furthermore comprises at least one natural or synthetic collagen-synthesis activator compound, notably an extract of *Centella asiatica,* ascorbic acid, peptides, β-glucans or extracts of algae or oatmeal containing them, or the derivatives of these products.

Advantageously, the concentration in collagen-synthesis activator compound varies from approximately 0.01% to approximately 10% by weight, preferably from approximately 0.05% to approximately 5% by weight in relation to the total weight of the composition.

According to another preferred embodiment of this invention, the composition furthermore comprises at least one natural or synthetic compound capable of preventing the production of free radicals, thus improving the free radical-formation-inhibiting properties of the first active principle. By way of illustration, compounds capable of preventing the formation of free radicals usable within the context of this patent application include: vitamin E or its esters, vitamin C, extracts of plants rich in flavonoids or polyphenols, such as Gingko biloba, green tree, milk thistle, etc., caffeic acid, ferulic acid, glutathione, enzymes such as superoxide dismutase, glutathione reductase and glutathione peroxidase, zinc salts, mannitol, or a derivative of these products.

Advantageously, the concentration in free radical-production-inhibiting compound varies from approximately 0.01% to approximately 20% by weight, preferably from approximately 0.1% to approximately 5% by weight in relation to the total weight of the composition.

According to another preferred embodiment of this invention, the compound furthermore comprises at least one natural or synthetic moisturizing compound, notably polyols, a constituent of the natural moisturizing factor (NMF), such as urea, an amino acid, an extract of honey, hyaluronic acid, a mucopolysaccharide, one of the constituents of intercellular cement, such as the ceramides, the fatty acids, cholesterol, etc., phospholipids or a derivative of these products.

Advantageously, the moisturizing compound concentration varies from approximately 0.1% to approximately 30% by weight, preferably from approximately 0.5% to approximately 10% by weight in relation to the total weight of the composition.

Advantageously, the composition according to the invention also comprises one or several preservatives, sun filters, excipients, stabilizers and/or perfumes, such as those normally used in the cosmetic industry.

According to one preferred embodiment of this invention, the composition comprises, as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 10% of lysine pyrrolidone carboxylate;
- from approximately 0.1% to approximately 5% of a soybean extract possessing anti-elastase activity;
- from approximately 0.1% to approximately 5% of a mixture of plants with anti-elastase activity.

According to another preferred embodiment of this invention, the composition comprises, as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 10% of arginine aspartate;
- from approximately 0.01% to approximately 2% of procyanidolic oligomers.

According to another preferred embodiment of this invention, the composition comprises, as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 5% of L-histidine;
- from approximately 0.1% to approximately 5% of a soybean extract with anti-elastase activity;
- from approximately 0.1% to approximately 5% of an algae extract with anti-elastase activity.

According to another preferred embodiment of this invention, the composition comprises, as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 5% of L-lysine pyrrolidone carboxylate;
- from approximately 0.1% to approximately 5% of arginine aspartate;
- from approximately 0.1% to approximately 10% of a soybean extract with anti-elastase activity.

The compositions according to the invention are particularly well adapted for cosmetic or dermatological use. Therefore, they may appear in all the galenic forms normally used for these products, namely, notably an aqueous, alcoholic or hydroalcoholic solution, a water-in-oil or oil-in-water emulsion, a composition in the form of an aerosol, powder, microgranulate, dispersion, lotion or ointment. These compositions are prepared according to the usual methods in the areas considered.

The compositions according to the invention are, notably, cleansing, protection, treatment or care compositions for the face, for the hands or for the body, for example, day cream, night cream, make-up remover cream, anti-aging serum, body milk, make-up remover milk, suntan milk, cleansing milk, suntan cream or oil, face or body gel, regenerating wrinkle reducer, make-up composition, sunless-tanning composition and bath composition.

The compositions according to the invention may furthermore consist of solid preparations, such as soaps or cleansing bars.

They may also be used in different compositions for the hair, notably shampoos, styling lotions, treatment lotions, hair creams or gels, colorant compositions or hair-loss gels.

Additional advantages and properties of this invention will further appear, in the light of the more detailed description that follows, of special embodiments of the invention, given illustratively and not exhaustively.

Example 1

Preparation of a Face Cream

A composition comprising the following ingredients (as a percentage by weight in relation to the total weight of the composition) is prepared as described below.

Ingredients	Content (%)
Phase 1	
Mixture of esters and oils	30.4
Stearic acid	3.1
Gamma oryzanol	1
Volatile silicon	0.8
Vitamin E esters	1.5
Antioxidants	0.03
Phase 2	
Glycol	2.5
Anionic surfactant	0.15
Carbomer	0.35
Purified water	41.99
Triethanolamine	1.4
60% sodium lactate	0.43

Phase 3	
Hyaluronic acid	0.125
Plant extracts *(Vitis vinifera,* witch hazel, St. John's wort)	1
Horsetail extract	1.5
Water	10
Phase 4	
Purified soybean protein extracts	1
Vitamin A palmitate	0.2
Lysine peptides	0.625
Lysine PCA	1
Perfume	0.35
Preservatives	0.55

Preparation:

After mixing the different constituents that compose it, phase 1 is heated to 80°C while being stirred in a melting pot.

The carbomer contained in phase 2 is dispersed in water at 90°C while being stirred, then poured into a mixer where it is neutralized with triethanolamine. The other phase 2 constituents are then added and the mixture is taken to 80°C while being stirred.

Phase 1 is poured into phase 2 in the mixer while being briskly stirred, then the mixture is cooled while being stirred. The different phase 3 constituents are mixed, then phase 3 thus obtained, after first having been homogenized, is added at 60°C. Lastly, phase 4 is prepared by mixing its constituents and is then introduced into the mixer at 40°C. The stirring is halted when the temperature of the product reaches 25°C.

Example 2

Preparation of a Night Cream

A composition comprising the following ingredients (as a percentage by weight in relation to the total weight of the composition) is prepared as described below.

Ingredients	Content (%)
Phase 1	
Mixture of esters and oils	32
Nonionic surfactants	4
Gamma oryzanol	1
Dry extract of Centella asiatica	0.15
Vitamin E esters	0.7
Phase 2	
Glycols	5
Carbomer	0.4
Xanthan gum	0.1
Purified water	37.995
TRIS	0.5
Nylon powder	0.5
EDTA	0.1
Perfluoroethers	0.3
Phase 3	
Hyaluronic acid	0.125
Purified water	10
Phase 4	
Purified soybean protein extracts	1
Yeast extract	0.1
Vitamin A palmitate	0.1
Encapsulated vitamin C	3
Arginine aspartate	0.4
Lysine PCA	1.1
Perfume	0.5

Colorants	0.08
Preservatives	0.85

Preparation:

After mixing the different constituents that compose it, phase 1 is heated to 80°C while being stirred in a melting pot.

The gelling agents contained in phase 2 are dispersed in water at 90°C while being stirred, then the gel formed is poured into a mixer. The other phase 2 constituents are added and the mixture is taken to 80°C while being stirred.

Phase 1 is poured over phase 2 in the mixer while stirring briskly, then the mixture is cooled while being stirred. Phase 3, after first being prepared and homogenized, is added at 60°C. Lastly, phase 4 is prepared by mixing its constituents and is then introduced into the mixer at 40°C. The stirring is halted when the temperature of the product reaches 25°C.

Example 3

Preparation of a Face Cream

A composition comprising the following ingredients (as a percentage by weight in relation to the total weight of the composition) is prepared as described below.

Ingredients	Content (%)
Phase 1	
Mixture of esters and oils	34.9
Nonionic surfactant	1
Stearic acid	3.1
Gamma oryzanol	0.5
Volatile silicon	0.8
Vitamin E esters	1.2
Antioxidants	0.01
Phase 2	
Glycol	2.5

Anionic surfactant	0.15
Carbomer	0.6
Purified water	38.065
Triethanolamine	2.6
Lactic acid	0.55
Phase 3	
Hyaluronic acid (sodium salt)	0.125
Plant extracts *(Vitis vinifera,* witch hazel, St. John's wort)	1
Horsetail extract	0.6
Purified water	10
Phase 4	
Purified soybean protein extracts	1
Vitamin A palmitate	0.15
Perfume	0.5
Preservatives	0.65

The preparation method is identical to that described an example 1.

Experimental results

a) Demonstration of the anti-glycation action

In this experiment, the binding of the glucose to the collagen and the bovine serum albumin is studied.

To do this, 0.25 mg/ml of collagen or 0.25 mg/ml of bovine serum albumin are incubated in sterile stoppered tubes for 0, 4 and 10 days, with quantities of radioactive glucose of 0, 5, 50 and 200 mM at 37°C in a total volume of 4 ml of 50 mM pH 7.4 phosphate buffer. At the end of the incubation period, the Schiff bases obtained by the reaction between the glucose and amino residues of the collagen or the bovine serum albumin are reduced by the addition of 1 ml of a 2 mM solution of tritiated sodium borohydride.

The reactional mixture obtained is then dialyzed at 4°C for 48 hours against distilled water to eliminate the glucose and $NaBH_4$ not bound to the proteins.

The radioactivity linked to the proteins after dialysis is counted with the aid of a liquid scintillation counter.

The same experiment is carried out in parallel by adding to the starting collagen or bovine serum albumin 200 mM of L-lysine hydrochloride.

Tables I and II found in the annex to this patent application illustrate the results. It appears from Table I that the binding of the glucose alone to the serum albumin increases over time, from a measured radioactivity value of 4920 cpm at t0 to a value of 11350 cpm after 10 days.

The addition of lysine hydrochloride prevents the glucose from binding, with the measured radioactivity increasing from a value of 4320 cpm at t0 to a value of 4515 cpm after 10 days.

The results are identical in Table II, which shows that the addition of lysine hydrochloride prevents the glucose from binding to the collagen.

The results obtained, therefore, show that in the tubes not containing L-lysine, the glucose binds to the collagen or to the bovine serum albumin, while in the tubes in which L-lysine has been added to the proteins, the binding of the glucose to the collagen or the bovine serum albumin is completely inhibited.

b) Effects of the compositions of the invention on the aging and elasticity of the skin.

The effect of composition 1 on the aging of the skin was studied. In this test, the viscoelastic properties of the skin were measured.

The biomechanical properties of the skin are evaluated by using a Dermal Torque Meter measuring device (Dia-Stron company, Great Britain). This device contains a probe that makes it possible to exert torsion on the skin with constant torque, with the angle formed measured as a function of time.

A recording is also made after release of the constraint.

Composition 1 is applied to the forearm of 20 volunteers, with the other forearm serving as a control. The product dose applied to the skin corresponds to the normal dose used and ranges between 1 and 2 mg/cm^2.

The measurements are taken before application of the composition and after 15 days, 30 days and 45 days of daily treatment.

The biomechanical properties are evaluated 12 to 15 hours after application of the composition.

The viscoelastic behavior of the skin can be determined by means of the following properties.

U_E: Instantaneous angular deviation (at 0.05 seconds) corresponding to the elastic extensibility of the skin subjected to a constant torque of 11 mNm.

U_V: Viscoelastic extensibility of the skin corresponding to the plastic deformation of the skin between 0.05 and 30 seconds.

U_F: Total extensibility of the skin including elastic extensibility (U_E) and viscoelastic extensibility (U_V). This total extensibility value is measured 30 seconds after the start of the application of a torque of 11 mNm.

U_R: Immediate elastic recovery after the torsion applied to the skin is stopped.

The results expressed in relation to time and the control are given in Tables III through V, which appear in the annex to this patent application.

Referring to Table III, it appears that the elastic extensibility (U_E) of the skin is considerably improved during the course of the treatment, achieving an increase of +41.3% at the end of 45 days.

Referring now to Table IV, it appears that the U_V/U_E ratio falls, meaning that skin firmness when the constraint is applied is also improved, dropping to a value of -24.2% at the end of 45 days.

Finally, referring to Table V, it appears that composition 1 also improves skin firmness after the constraint has been stopped, with the U_R/U_F ratio increasing by 12.4% at the end of 45 days.

The daily use of composition 1, therefore, makes it possible to considerably improve the viscoelastic properties of the skin: the skin is toned up while remaining supple and moisturized.

By way of comparison, composition 3 is tested under the same conditions as composition 1 after 15 days and 30 days of treatment.

The experimental results are illustrated in Tables VI, VII and VIII, which appear in an annex to this patent application.

Table VI clearly shows a reduction of the elastic extensibility of the skin throughout the treatment.

Table VII shows that the skin does not become firmer during the treatment and that merely a slowdown of the reduction of the firmness of the skin can be observed.

Table VIII also shows that the skin does not become firmer, inasmuch as the values measured at the end of 15 days and 30 days are very close to each other.

It therefore appears that composition 3, which does not contain any anti-glycation principle, only produces a negligible effect on the elasticity and firmness of the skin in comparison with the results obtained with composition 1.

c) Anti-wrinkle effect of the compositions of the invention

The anti-wrinkle effect of composition 2 was studied in the following way.

Twenty volunteers aged 40 to 55 applied composition 2 to their faces for four weeks, with a crow's foot used as a control.

Silicon impressions of the crow's feet were taken before and after treatment and then observed with a confocal microscope.

The densities of the surface microrelief of the skin (0-54 μm), of the medium wrinkles (56-110 μm) and deep wrinkles (112-400 μm) are measured in each impression. The results are

expressed as a variation percentage in relation to t0 (before treatment) and in relation to the untreated control zone.

The results (average in 20 subjects) were as follows:

- Increase of the microrelief: 6%;
- Reduction of the medium wrinkles: 6%;
- Reduction of the deep wrinkles: 59%.

The increase of the microrelief is a positive result generally showing an improvement in the level of moisturization of the skin.

It goes without saying that this invention is not limited to the preferred embodiments just described above, but, on the contrary, embraces all variations.

A person skilled in the art may indeed make modifications in this invention without thereby going beyond the context of its characteristic elements, as defined in the following claims.

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Annex

Table I
Radioactivity bound to serum albumin (cpm)

Glucose	Lysine, HCl	T0	4 Days	10 Days
200 mM	0	4920 ± 430	9875 ± 430	11350 ± 540
200 mM	200 mM	4920 ± 130	4770 ± 200	4515 ± 250

Table II
Radioactivity bound to collagen (cpm)

Glucose	Lysine, HCl	T0	4 Days	10 Days
200 mM	0	2015 ± 85	3440 ± 350	3880 ± 270
200 mM	200 mM	1910 ± 165	1770 ± 55	1520 ± 190

Table III

Time	U_E (Average in 20 Persons)
15	+ 23.7%
30	+ 30.0%
45	+ 41.3%

Annex (continuation)

Table IV

Time	U_V/U_E (Average in 20 Persons)
15	- 12.6%
30	- 20.9%
45	- 24.2%

Table V

Time	U_R/U_F (Average in 20 Persons)
15	- 13.2%
30	+ 20.0%
45	+ 12.4%

Annex (continuation and end)

Table VI

Time	U_E (Average in 20 Persons)
15	- 12.7%
30	- 5.4%

Table VII

Time	U_V/U_E (Average in 20 Persons)
15	+ 9.8%
30	+ 5.0%

Table VIII

Time	U_R/U_F (Average in 20 Persons)
15	+ 3.1%
30	+ 2.0%

Claims

1. Cosmetic or dermatological composition, with a view to slowing down the aging of the skin and/or increasing the elasticity of the skin, characterized by the fact that it comprises a first active principle chosen from among natural or synthetic compounds capable of inhibiting the formation of Amadori products by the non-enzymatic reaction of sugars, notably glucose, with the collagen of the skin, with said first principle consisting of a single compound or a mixture of several compounds; and by the fact that it comprises a second active principle chosen from among the natural or synthetic compounds capable of inhibiting the activity of the elastases of the skin, with said second active principle consisting of a single compound or a mixture of several compounds.

2. Composition according to claim 1, characterized by the fact that said first active principle is chosen notably from among the amino acids, preferably the basic amino acids, the peptides, preferably those containing one or several basic amino acids, allantoin, vitamin E, vitamin B_1, vitamin B_6, thiourea, dithiothreitol, the derivatives of organic silicon and/or the derivatives of these products.

3. Composition according to claim 2, characterized by the fact that the amino acids comprise notably lysine, arginine and histidine.

4. Composition according to claim 2, characterized by the fact that the amino acid derivatives comprise, notably, lysine pyrrolidone carboxylate, arginine pyrrolidone carboxylate and arginine aspartate.

5. Composition according to claim 1, characterized by the fact that said second active principle is chosen from among the compounds capable of blocking the action of leukocyte elastase and/or the elastases synthesized by fibroblasts.

6. Composition according to claim 5, characterized by the fact that said second active principle is chosen, notably, from among vegetable extracts rich in tannins, anthocyanosides, procyanidolic oligomers, soybean extract, α-1-anti-trypsine, algae extracts, polysaccharides, notably sulfated polysaccharides and ceramides.

7. Composition according to any one of claims 1 to 6, characterized by the fact that it comprises in addition at least one natural or synthetic collagen-synthesis activator compound, notably, an extract of *Centella asiatica,* ascorbic acid, peptides, β glucans or algae or oatmeal extracts containing them or derivatives of these products.

8. Composition according to any one of claims 1 to 7, characterized by the fact that it comprises in addition at least one natural or synthetic compound capable of inhibiting the production of free radicals, notably vitamin E or its esters, vitamin C, extracts of plants rich in flavonoids or polyphenols, such as Ginkgo biloba, green tea, milk thistle, caffeic acid, ferulic acid, glutathione, enzymes such as superoxide dismutase, glutathione reductase and glutathione peroxidase, zinc salts, mannitol or a derivative of these products.

9. Composition according to any one of claims 1 to 8, characterized by the fact that it comprises in addition at least one natural or synthetic moisturizing compound, notably polyols, a constituent of NMF, such as urea, amino acid, an extract of honey, hyaluronic acid, a

mucopolysaccharide, one of the constituents of the intercellular cement, such as the ceramides, fatty acids, cholesterol, phospholipids or a derivative of these products.

10. Composition according to any one of claims 1 to 9, characterized by the fact that it comprises in addition one or several preservatives, sun filters, excipients, stabilizers and/or perfumes.

11. Composition according to any one of claims 1 to 10, characterized by the fact that it comprises from approximately 0.01% to approximately 50% by weight of said first active principle, preferably from approximately 0.1% to approximately 10% by weight, more preferably from approximately 0.2% to approximately 5% by weight in relation to the total weight of the composition.

12. Composition according to any one of claims 1 to 11, characterized by the fact that it comprises from approximately 0.01% to approximately 50% by weight of said second active principle, preferably from approximately 0.1% to approximately 10% by weight, more preferably from approximately 0.5% to approximately 5% by weight in relation to the total weight of the composition.

13. Composition according to any one of claims 1 to 12, characterized by the fact that it comprises from approximately 0.01% to approximately 10% by weight, preferably from approximately 0.05% to approximately 5% by weight of a collagen-synthesis activator compound in relation to the total weight of the composition.

14. Composition according to any one of claims 1 to 13, characterized by the fact that it comprises from approximately 0.01% to approximately 20% by weight, preferably from approximately 0.1% to approximately 5% by weight of the free-radical production inhibiting compound in relation to the total weight of the composition.

15. Composition according to any one of claims 1 to 14, characterized by the fact that it comprises from approximately 0.1% to approximately 30% by weight, preferably from approximately 0.5% to approximately 10% [by weight] of a moisturizing compound in relation to the total weight of the composition.

16. Composition according to any one of claims 1 to 15, characterized by the fact that it comprises as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 10% of lysine pyrrolidone carboxylate;
- from approximately 0.1% to approximately 5% of a soybean extract possessing anti-elastase activity;
- from approximately 0.1% to approximately 5% of a mixture of plants with anti-elastase activity.

17. Composition according to any one of claims 1 to 15, characterized by the fact that it comprises as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 10% of arginine aspartate;
- from approximately 0.01% to approximately 2% of procyanidolic oligomers.

18. Composition according to any one of claims 1 to 15, characterized by the fact that it comprises as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 5% of L-histidine;
- from approximately 0.1% to approximately 5% of a soybean extract with anti-elastase activity;
- from approximately 0.1% to approximately 5% of an algae extract with anti-elastase effect.

19. Composition according to any one of claims 1 to 15, characterized by the fact that it comprises as a percentage by weight in relation to the total weight of the composition:

- from approximately 0.1% to approximately 5% of L-lysine pyrrolidone carboxylate;
- from approximately 0.1% to approximately 5% of arginine aspartate;
- from approximately 0.1% to approximately 10% of a soybean extract with anti-elastase effect.

20. Use of one or several natural or synthetic compounds capable of inhibiting the formation of Amadori products by a non-enzymatic reaction of sugars, notably glucose, with the collagen of the skin and one or several natural or synthetic compounds capable of inhibiting the activity of the skin elastases as active principles for the preparation of a cosmetic composition intended to control the aging of the skin and/or increase the elasticity of the skin.

21. Use according to claim 20, in which said compounds are as defined in any of claims 1 to 10.